

### **REMARKS**

The Examiner's indication of allowable subject matter is noted with appreciation.

Claims 1-12 are pending in the application. Allowable claim 5 has been rewritten in independent form. The original claims have also been revised to improve claim language. New claims 11-12 have been added to provide Applicants with the scope of protection to which they are believed entitled. The amended/new claims find solid support in the original specification and drawings, especially FIG. 2, and page 23, lines 23-28. The Abstract has been placed in compliance with commonly accepted US patent practice. No new matter has been introduced through the foregoing amendments.

Claims 5 and 10 stand allowed as kindly indicated in the Office Action by the Examiner.

The art rejections are believed overcome in view of the amendments made to independent claims 1 and 6.

In particular, amended independent claim 1 now recites, among other things,

a tap coefficient updating unit comprising  
a first input coupled to an output of the error signal calculating unit,  
a second input coupled to an output of the trellis decoding unit,  
a third input coupled to an output of the input signal storing unit, and  
an output coupled to the channel equalizing unit for updating a tap coefficient based on the error signal received from the error signal calculating unit, the output signal of the trellis decoding unit, and the output signal of the input signal storing unit, and for providing the updated tap coefficient to the channel equalizing unit.

Amended independent claim 6 now recites, among other things,

g) calculating an error signal by comparing an output signal of the mode selected in the step f) to the output signal of the equalizer, and updating a tap coefficient of a filtering block of the equalizer based on the error signal, the output signal of the equalizer and the receiving signal passed through the channel-matched filter; and

In other words, the amended independent claims emphasize that the tap coefficient(s) of the equalizer is/are updated based on three signals

- (1) the error signal,
- (2) the output signal of the equalizer and
- (3) the receiving signal passed through the channel-matched filter.

This claim feature finds support in at least FIG. 2 which discloses that the tap coefficient(s) of the equalizer (22 in FIG. 2) is/are updated (at 29/30 in FIG. 2) based on (1) the error signal, (2) the output signal of the equalizer and (3) the receiving signal passed through the channel-matched filter.

The applied references do not teach or suggest the claimed tap coefficient updating based on the data identified above at (1)-(3). The closest reference appears to be *Fimoff* (U.S. Patent Application Publication No. 2004/0213341) which, while appearing to disclose in FIG. 5 a trellis decoder 42 having a TBD of 1 and a tap weight calculator 64, fails to teach or suggest that the tap weights are updated based on multiple signals as presently claimed. *See*, for example, box 62 in FIG. 5 of *Fimoff* which has only two inputs meaning that the tap weight updating in box 62 of *Fimoff* is based only on two signals, rather than three signals as presently claimed.

Accordingly, Applicants respectfully submit that independent claims 1 and 6 are patentable over the applied art of record.

The dependent claims, including any new claim(s), are considered patentable at least for the reason(s) advanced with respect to the respective independent claim(s).

Claims 9 and 11 should also be considered separately patentable as the claims include the indicated allowable subject matter.

Accordingly, Applicants respectfully submit that all claims are now in condition for

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allowance. Early and favorable indication of allowance is courteously solicited.

The Examiner is invited to telephone the undersigned, Applicant's attorney of record, to facilitate advancement of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,  
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